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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/007,859	11/13/2001	Mark C. Astley	GB920010085US1	7123
7590	03/21/2006		EXAMINER TOLENTINO, RODERICK	
IBM Corp, IP Law Dept T81/503 3030 Cornwallis Road PO Box 12195 Research Triangle Park, NC 27709-2195			ART UNIT 2134	PAPER NUMBER

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/007,859	ASTLEY ET AL.	
	Examiner	Art Unit	
	Roderick Tolentino	2134	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/21/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/13/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 16 are pending.

Response to Arguments

2. Applicant's arguments directed towards claims 1 and 12 – 15, filed 12/21/2005 have been fully considered but they are not persuasive.

However, Applicant's arguments with respect to added limitations in claims 1, 12, 13, 14 and 15 have been considered but are moot in view of the new ground(s) of rejection.

3. Applicant had further argued on pages 10 – 11 that in claim 3 Davis fails to teach a process at the client data processing system applying the cipher function to the client password which corresponds to the stored cipher-protected client password, wherein the cipher function is an encryption algorithm. Examiner respectfully disagrees. Davis teaches a process at the client data processing system applying the cipher function to the client password which corresponds to the stored cipher-protected client password, wherein the cipher function is an encryption algorithm (Davis, Col. 2 Lines 4 – 14). Encryption is the masking of data to prevent unauthorized persons from obtaining the passwords. Hashing is a form of masking data to prevent unauthorized persons from viewing the information. Evidence of this is provided in the attached Technical Dictionary.

4. Applicant has further argued on pages 12 – 13 that in claim 9 Davis in view of Yatsukawa fails to teach that the server data processing system's password repository

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is preferably integrated within the operating system of the server data processing system. Examiner respectfully disagrees. Davis in view of Yatsukawa teaches that the server data processing system's password repository is preferably integrated within the operating system of the server data processing system (Yatsukawa, Col. 15 Lines 5 – 10 and Col. 19 Lines 26 – 36). The server is integrated with an OS system, which does not necessarily have to coincide with the OS on the client side. The server includes the database for authentication, which is thus integrated with the OS of the server.

5. Applicant's arguments in regards to 35 U.S.C. 112 rejections have been considered and are deemed persuasive. The claim 35 U.S.C. 112 rejections have been withdrawn from this action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 – 3, 6 – 8 and 12 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al. U.S. Patent No. (6,064,736) in view of Olkin et al. US-PG Publication No. (2003/0046533).

7. As per claim 1, Davis teaches a process at the client data processing system applying the cipher function to the client password, which corresponds to the stored

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cipher-protected client password, thereby to generate a cipher-protected client password, which is equivalent to the stored cipher-protected client password; (Davis, Fig.3, Item 321, Client hashes password) and performing an authentication check using the client data processing system's cipher-protected client password and the server data processing system's stored cipher-protected client password as a shared secret for said authentication check (Davis, Fig. 3, Col. 4 Lines 42 – 56) but fails to disclose the authentication check is adapted to be performed without having the client password in a cleartext format on the server data processing system.

However, in an analogous art, Olkin teaches disclose the authentication check is adapted to be performed without having the client password in a cleartext format on the server data processing system (Olkin, Paragraph 0150).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Olkin's secure email system with Davis' password verification method and system, because it offers the advantage of a highly secure form of network communications between a sender and receiver (Olkin, Paragraph 0023).

8. As per claim 2 Davis as modified teaches an authentication check includes performing a mutual challenge-response authentication protocol check (Davis, Fig. 3, Items 319, 321, 323, 327, 329, 331 and 333).

9. As per claim 3 Davis teaches the cipher function is an encryption algorithm (Davis, Col. 4, Lines 50 – 52).

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10. As per claim 6 Davis as modified teaches the cipher function is a hash function (Davis, Col. 4, Lines 50 – 52).

11. As per claim 7 Davis as modified teaches a process at the server data processing system retrieving from the repository the respective token for a stored cipher-protected client password, and transmitting the token to a client data processing system (Davis, Col. 5, Lines 11 – 14) and the process at the client data processing system applying the cipher function to the combination of the transmitted token and the client password which corresponds to the stored cipher-protected client password, thereby to generate the equivalent cipher-protected client password for use as a shared secret (Davis, Col. 5, Lines 18 – 31).

12. As per claim 8 Davis as modified teaches the token is a random number (Davis, Col. 5, Lines 11 – 13, salt).

13. As per claims 12 - 15 Davis teaches a process at the server data processing system retrieving from the repository the respective token for a stored cipher-protected client password (Davis, Fig 5 Item 311), and transmitting the token to a client data processing system (Davis, Col. 5, Lines 11 - 20), a process at the client data processing system applying the cipher function to the combination of the transmitted token and the client password which corresponds to the stored cipher-protected client password (Davis, Col. 5 Lines 23- 24), thereby to generate a cipher-protected client password which is equivalent to the stored cipher-protected client password (Davis, Fig. 5 Item 521), and using the client data processing system's cipher-protected client password and the server data processing system's stored cipher-protected client password as a

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shared secret for a mutual challenge-response authentication check (Davis, Fig. 5 Items 327, 329, 531, 333 and 335) but fails to disclose the authentication check is adapted to be performed without having the client password in a cleartext format on the server data processing system.

14. However, in an analogous art, Olkin teaches disclose the authentication check is adapted to be performed without having the client password in a cleartext format on the server data processing system (Olkin, Paragraph 0150).

15. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Olkin's secure email system with Davis' password verification method and system, because it offers the advantage of a highly secure form of network communications between a sender and receiver (Olkin, Paragraph 0023).

16. As per claim 16 Davis as modified teaches generating a cipher-protected client password by applying said first cipher function to the client's password, thereby to provide the client and server processes with a shared secret (Davis, Col. 5 Lines 11 – 13), generating a client response and counter-challenge to the server challenge, the client response and counter-challenge including a message authentication code computed using the cipher-protected client password (Davis, Fig. 5, Items 521 and 523), forwarding the client response and counter-challenge to the server process (Davis, Fig. 5, Item 329) receiving the forwarded server response; generating an anticipated server response and comparing the received and anticipated server responses to determine whether they match; and in response to a positive match,

confirming successful authentication (Davis. Fig. 5, Items 531, 533 and 335).

17. Claim 4, 5, 9,10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis et al. U.S. Patent No. (6,064,736) and Olkin et al. US-PG Publication No. (2003/0046533) as applied to claims 1 and 12 – 15 and in view of Yatsukawa U.S. Patent No. (6,148,404).

18. As per claim 4, Davis in combination with Olkin fail to teach an authentication check comprises generating a common secret session key at both the client and server data processing systems, using the generated encrypted client password at the client and the stored encrypted client password at the server, and using this common secret session key in a mutual challenge-response authentication protocol. However, Yatsukawa teaches an authentication check comprises generating a common secret session key at both the client and server data processing systems, using the generated encrypted client password at the client and the stored encrypted client password at the server, and using this common secret session key in a mutual challenge-response authentication protocol (Yatsukawa, Col. 19, Lines 62 – 67).

19. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a common session-key with Davis' password verification method and system, because it offers the advantage of confidentiality by limiting the chance of leakage of information between client and server along with unauthorized intrusion (Yatsukawa, Col. 1 Lines 35 – 42).

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20. As per claim 5, Davis as modified teaches a secret session key is generated by applying a cipher function to each of the generated encrypted client password at the client and the stored encrypted client password at the server (Col. 3, Lines 52 – 55).

21. As per claim 9 Davis as modified fails to teach the server processing system's password repository is preferably integrated within the operating system of the server data processing system. However, Yatsukawa teaches the server processing system's password repository is preferably integrated within the operating system of the server data processing system (Yatsukawa, Col. 19, Lines 1 – 6).

22. At the time the invention was made it would have been obvious to a person of ordinary skill in the art to use an operating system with Davis' password verification method and system, because it offers the advantage of increasing the confidentiality and integrity to a system. (Yatsukawa, Col. 1, Lines 33 - 38).

23. As per claim 10 Davis as modified teaches the operating system is an operating system conforming to the UNIX operating system standard or derived from a UNIX conforming system (Yatsukawa, Col. 19, Lines 3 – 6).

24. As per claim 11 Davis teaches the encryption algorithm is provided by the UNIX crypt() function (Davis, Col. 5, Lines 13 – 16).

Conclusion

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roderick Tolentino whose telephone number is (571) 272-2661. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Morse can be reached on (571) 272-3838. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Roderick Tolentino
Examiner
Art Unit 2134

Roderick Tolentino



GUY LAMARRE
PRIMARY EXAMINER